



# FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative



## Feed the Future Africa Great Lakes Region Coffee Support Program (AGLC) Policy Roundtable

**Topic:** Challenges and Opportunities for Women in the Rwandan Coffee Sector

June 2017 • Kigali, Rwanda



**USAID**  
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**MICHIGAN STATE UNIVERSITY**



**GLOBAL KNOWLEDGE INITIATIVE**



Institute of Policy Analysis and Research - Rwanda

# Roundtable Introduction

# AGLC background

- **AGLC is a 3-year USAID-funded initiative that addresses 2 major challenges in the coffee sector in Rwanda (and the Africa Great Lakes region)**
  - Reduce antestia bug/potato taste defect (PTD)
  - Raise coffee productivity
- **Partners**
  - Rwanda: Inst. of Policy Analysis and Research (IPAR) and Univ. of Rwanda (UR)
  - USA: Michigan State University (MSU) and Global Knowledge Initiative (GKI)
  - Numerous public and private sector partners
- **Components: • applied research • policy engagement • capacity building**

# Applied research component

- **AGLC draws upon a broad mix of quantitative and qualitative methodologies, including:**
  - **Coffee farmer/household surveys (and CWS survey)**
  - **Experimental field/plot level data collection**
  - **Key Informant Interviews**
  - **Focus Group Discussions**
- **Comprehensive coffee sector data base**
  - **Goal to integrate information from these four data collection activities**
  - **Provide empirical basis for policy engagement and farmer capacity building**

# Guiding question:

**What are the differences between male and female heads of households that produce coffee in Rwanda?**

**This is important to understand because evidence shows that when the conditions of women farmers improve:**

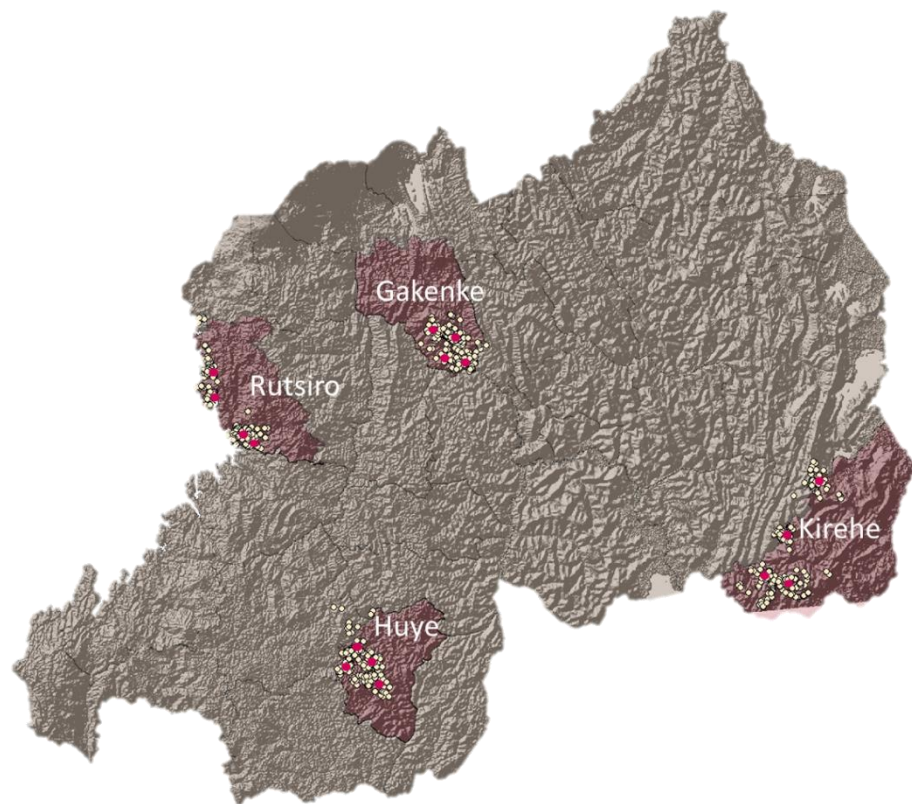
- **Agricultural productivity increases**
- **Poverty is reduced**
- **Household nutrition improves**
- **Empowers women**

# Methodology



## Baseline/midline survey of coffee growers

- Geographically dispersed sample across four coffee growing districts: Rutsiro, Huye, Kirehe and Gakenke.
- 4 CWSs in each District (2 cooperatives, 2 private)
- 64/32 HHs randomly selected from listings of each of the 16 CWSs
  - Baseline (64 x 16 = 1024 HHs)
  - Midline (32 x 16 = 512 HHs)





# Qualitative data

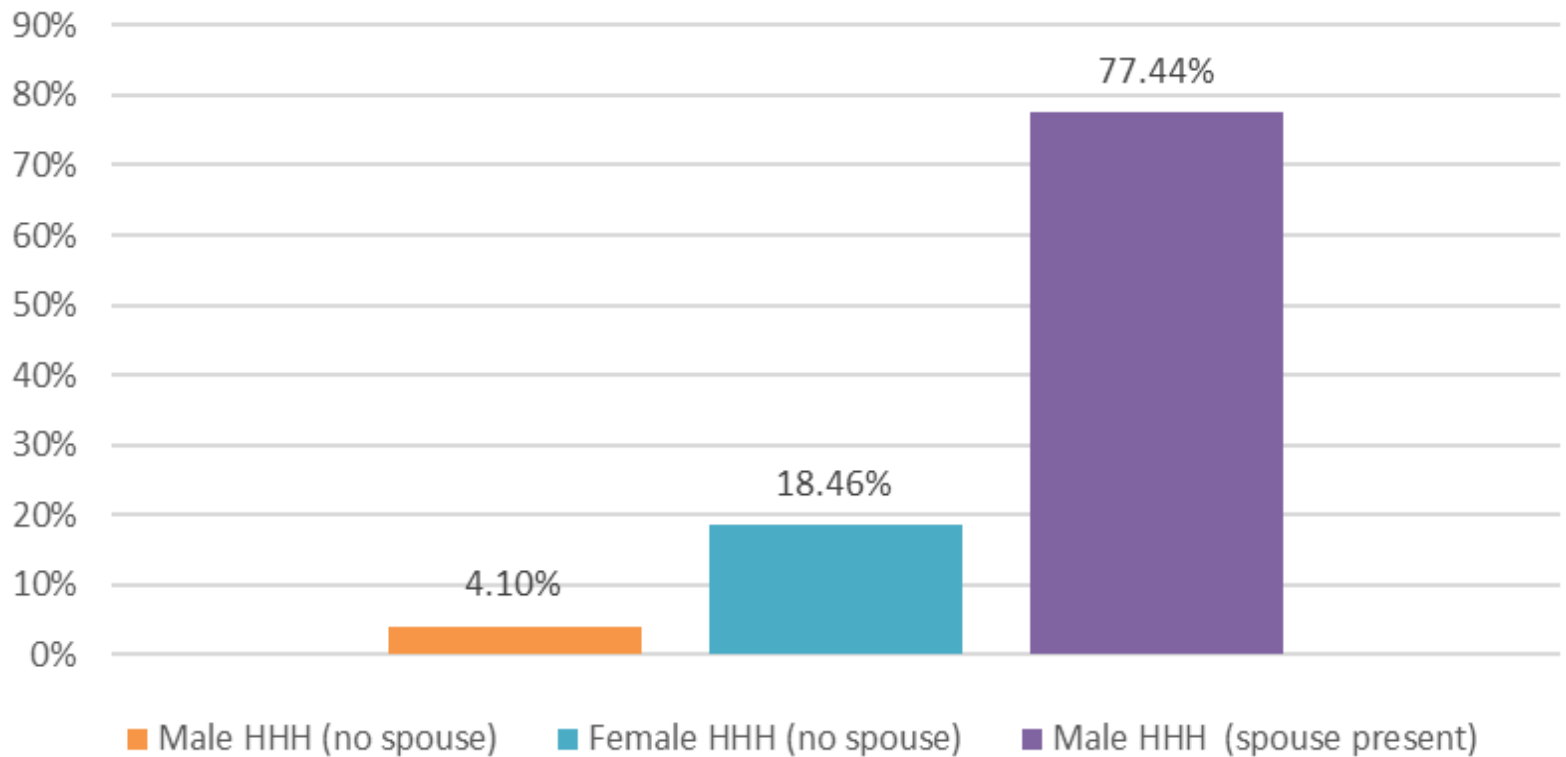
- **Key informant interviews**
  - Key coffee sector leaders including public sector representatives, farmer organizations, and private sector stakeholders.
  - Focused on challenges identified by stakeholders and provided insights into critical areas of convergence and disagreement among various specialty coffee sector stakeholder groups.
- **Focus group discussions**
  - Held with major coffee stakeholder groups including coffee farmers, washing station managers, coffee exporters, others.
  - Groups of 5-7 members of each stakeholder group.

# Research Findings

# Recap of what we learned from 2015 findings

1. Low and stagnating coffee production coming up short of targets for growth
2. Producer prices 25-30% below other coffee producing countries in region
3. Lower productivity (Kg/tree) than others in the region
4. Cost of production is high relative to returns so that a large proportion of growers suffer net losses in coffee
5. Incentives and capacity differs among larger and smaller producers
6. Importance of prices and price stability for farmer investment in higher production and productivity
7. Low farmer investment has contributed to weak /old trees yielding low quality coffee and has invited antestia/PTD

## Sample by Gender of the Head of the Household





# **Are the female-headed households different than the male-headed households?**

**Table 1. Age of the Head of Household by Gender**

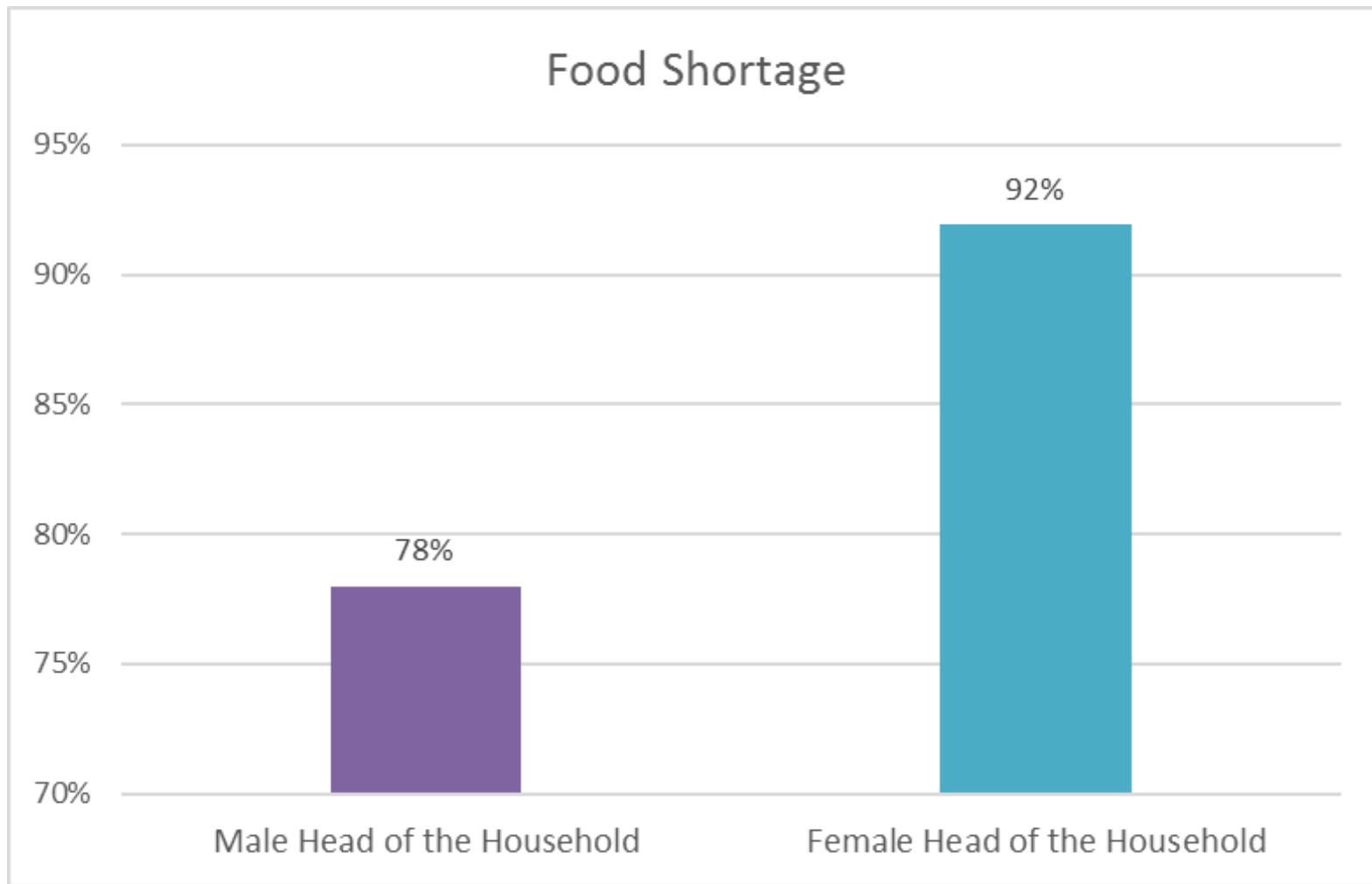
	<b>Females</b>		<b>Males</b>	
	Total	%	Total	%
Less than 35	7	3.70%	159	19.04%
36-50	42	22.22%	298	55.69%
51-65	89	47.09%	261	31.25%
More than 66	51	27%	117	14.01%
Average age	58.14		49.49	

**Table 2. Socio-demographic statistics**

	Females				Males				p-value
	Total	Median	Mean	St Dev	Total	Median	Mean	St Dev	
Age		59.00	58.14	11.96		48.00	49.49	14.15	<0.001
Illiteracy	113		59.79		212		25.38		<0.001
Widow	147		77.8		17		2		<0.001
Household size		4	4.23	2.05		5	5.57	2.08	<0.001
Children under 16		1	1.46	1.31		2	2.24	1.53	<0.001
Adults older than 65			0.306	0.49			0.22	0.54	<0.001
Active Adults in Household		2.00	2.47	1.57		3.00	3.10	1.60	<0.001
Cooperative member	118				449				0.03

Note: p-value denotes significance of statistical test for differences in distributions across gender of the head of the household





# **Are the female-headed farms different than the male-headed farms?**

**Table 3. Farm Characteristics**

	Females				Males				p-value
	Total	Median	Mean	St Dev	Total	Median	Mean	St Dev	
Total land owned (sq meters)		7369	10243	10144.4	1000		12380	10756.21	0.0129
Total land for cultivation (sq meters)		5970	8691.69	8822.97	8348		10584.04	9257.95	0.0106
Total area under coffee production (sq meters)		1264	2534.78	3786.5	1960		3420.2	5090.9	0.0244
Household grows other crops besides coffee	188				829				
Percentage of the land growing coffee		0.024	0.33	0.27		0.27	0.35	0.26	0.2640

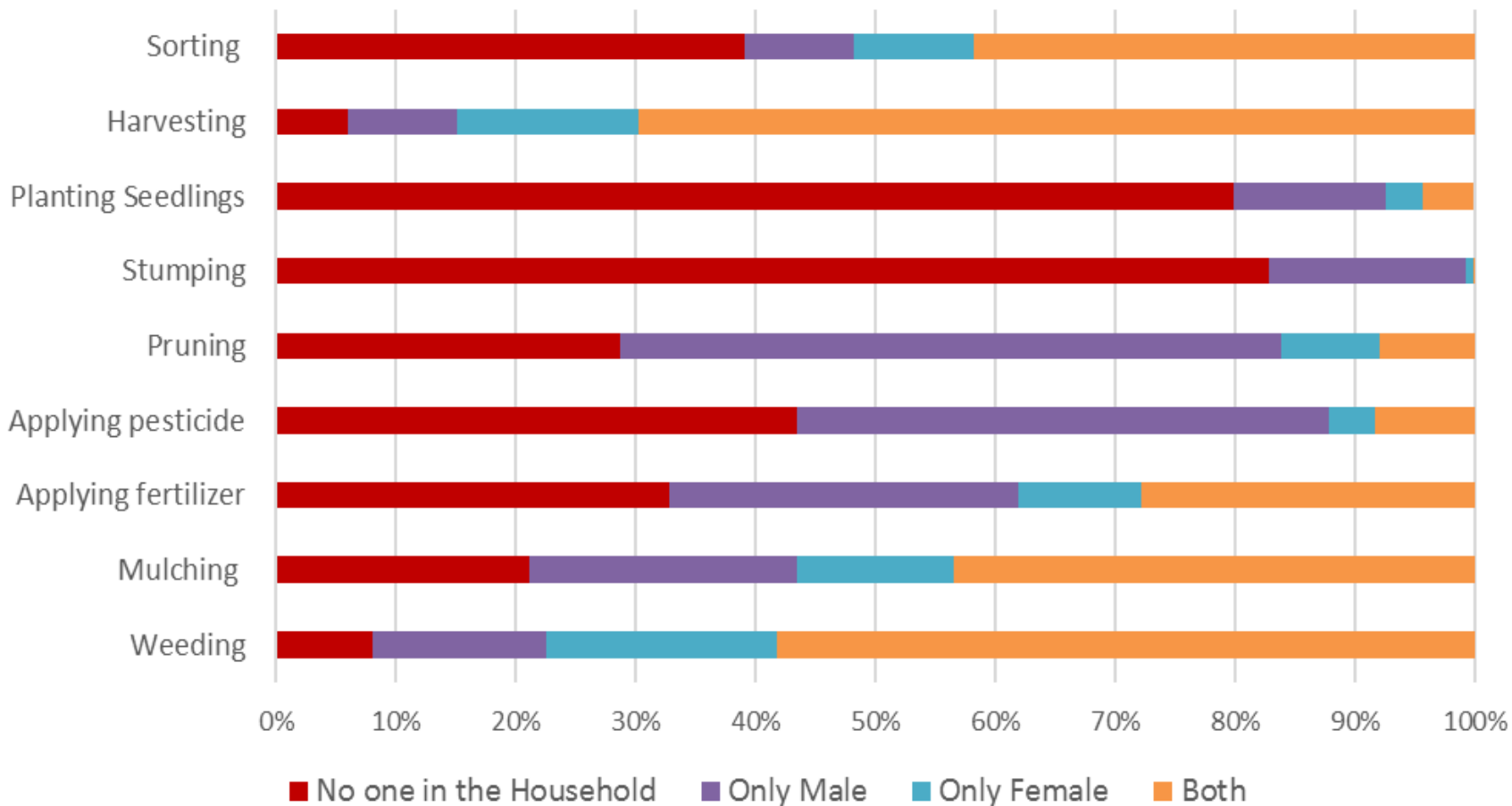
Note: p-value denotes significance of statistical test for differences in distributions

**Table 4. Coffee Production**

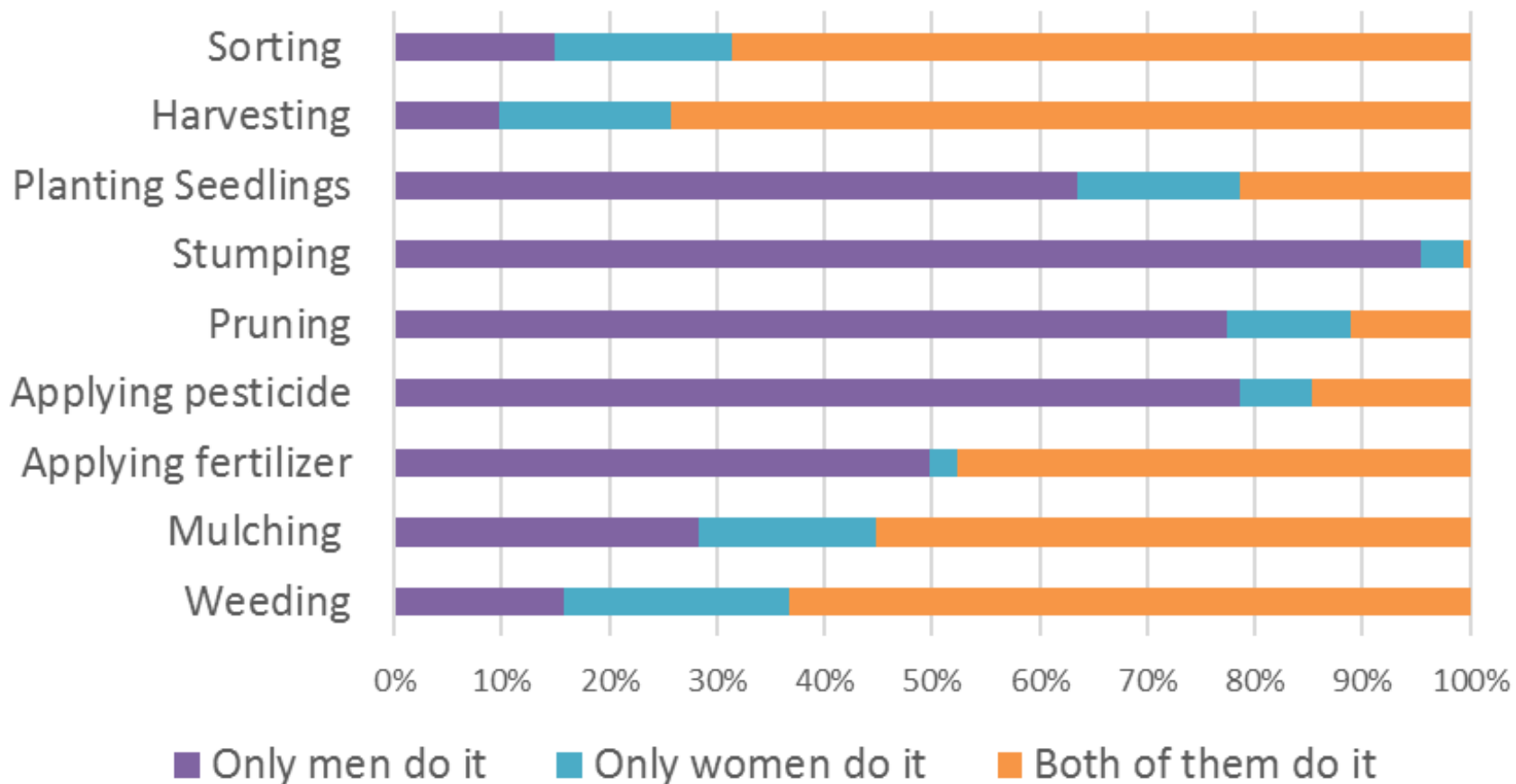
	Females			Males			<i>p</i> -value
	Median	Mean	St Dev	Median	Mean	St Dev	
Years growing coffee	30	28.84	15.96	20	23.21	14.88	<0.001
Productive trees	300	596.16	894.7	412	767.67	1212.22	0.0668
Age of trees	25	27.72	15.15	18.18	20.32	13.12	<0.001
Total cherry harvest (2015)	420	733.30	1296.78	600	1035.04	1897.20	0.0379
Total Income (coffee and non-coffee, 2015)	199000	362639.50	522608.20	380850.00	614516.30	1560121	0.03
Total Income from Coffee (2015)	83000	159993.40	310968.80	136940.00	226591.20	379563.90	0.02
Coffee as a share of income (2015)	0.45	0.49	0.31	0.42	0.43	0.27	0.015
Income not including coffee	99000	202646.1	363117.8	210000	387637.1	1316427	0.015

Note: *p*-value denotes significance of statistical test for differences in distributions across gender of the head of the household

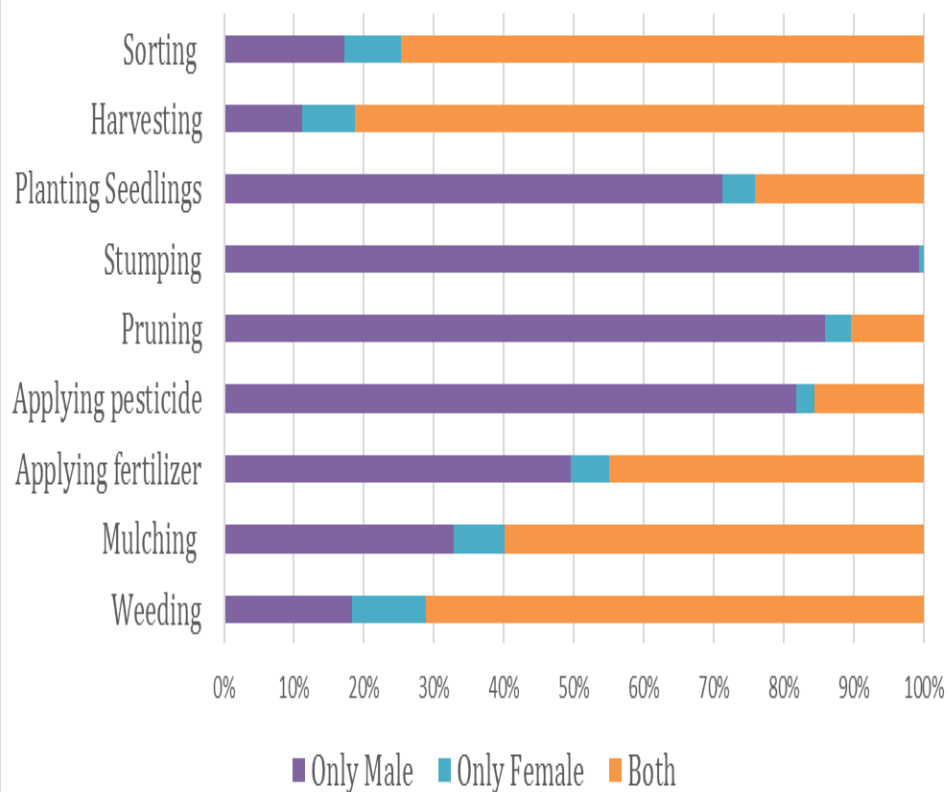
## Household Labor



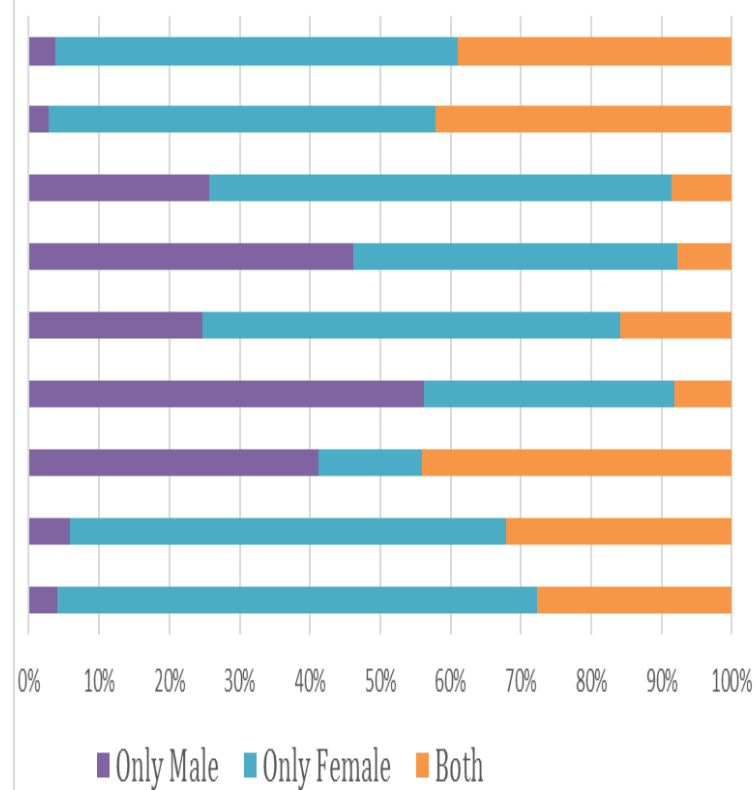
## Labor done at the household



### Male head of the household



### Female head of the household





**Table 5. Coffee Labor**

		No one is doing this activity (HH or labor)	Labor hired outside of the household	Labor done at the HH and also hired	Only family is providing this labor
Weeding	Male Head of HH	0.24	7.19	49.34	43.11
	Female head of HH	0.53	9.52	45.50	44.44
Mulching	Male Head of HH	7.43	12.81	39.76	40.60
	Female head of HH	10.05	18.52	34.39	38.10
Applying Fertilizer	Male Head of HH	26.71	4.07	14.49	54.73
	Female head of HH	33.86	7.41	12.70	46.03
Applying Pesticide	Male Head of HH	28.74	10.66	12.22	48.38
	Female head of HH	39.15	22.22	8.47	30.16
Pruning	Male Head of HH	5.03	19.64	13.17	62.16
	Female head of HH	8.99	37.57	10.05	43.39
Stumping	Male Head of HH	77.37	3.11	2.63	16.89
	Female head of HH	83.07	10.05	1.06	5.82
Planting Seedlings	Male Head of HH	78.44	1.20	4.55	15.81
	Female head of HH	77.78	3.70	3.17	15.34
Harvesting	Male Head of HH	0.48	4.91	67.43	27.19
	Female head of HH	2.12	6.35	63.49	28.04
Sorting	Male Head of HH	37.37	0.48	4.79	57.37
	Female head of HH	43.39	1.06	4.76	50.79

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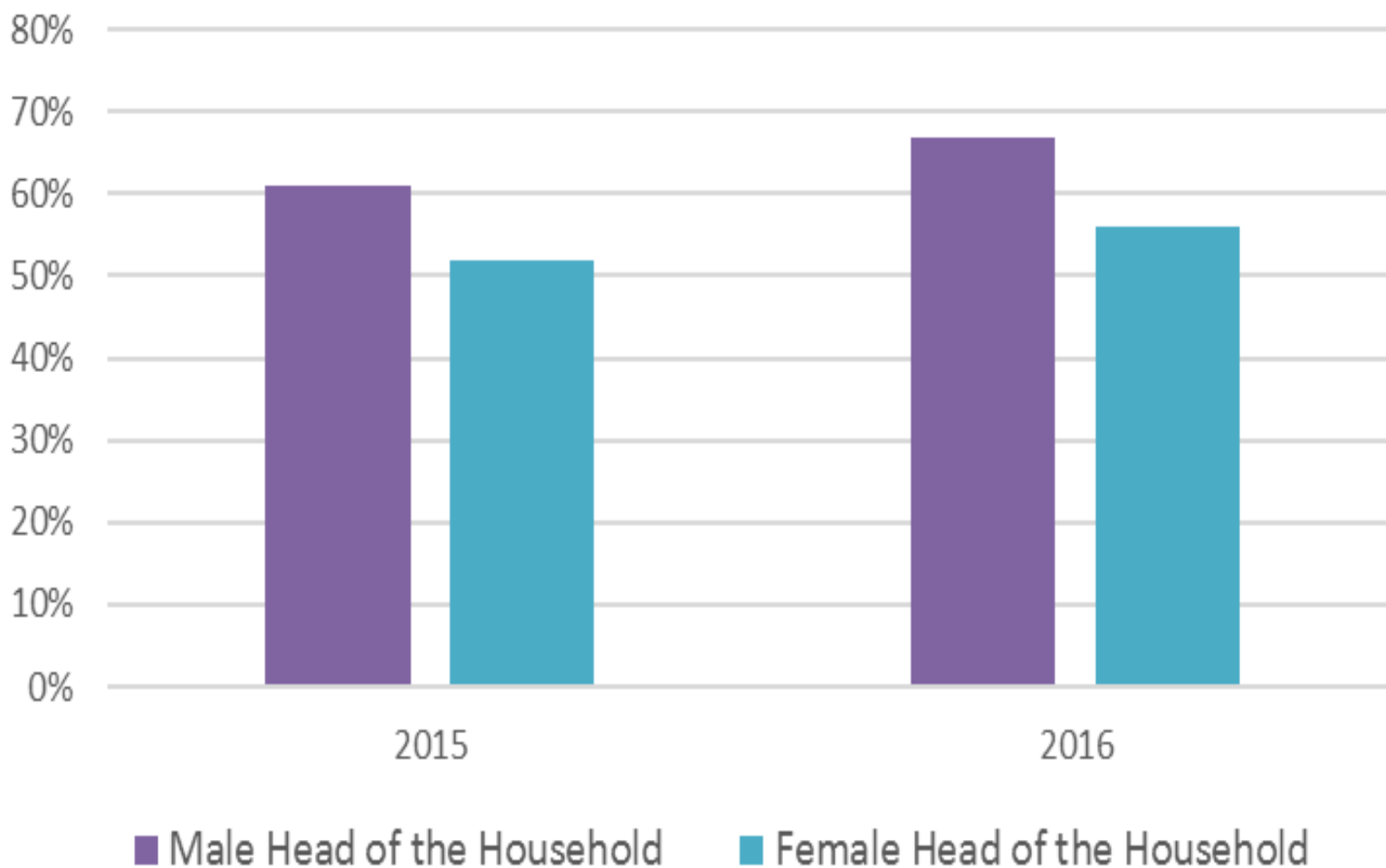
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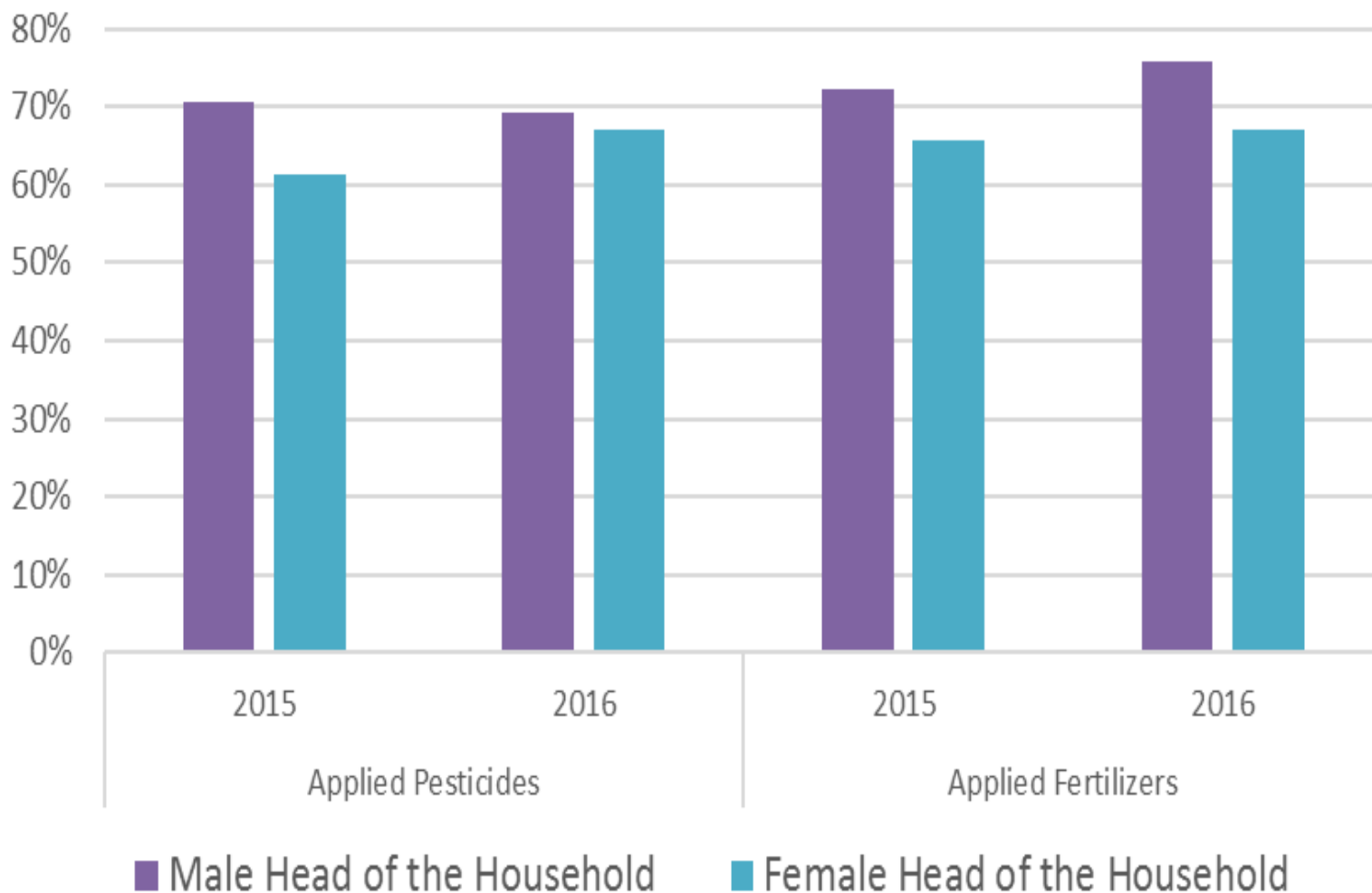
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## Applied Manure

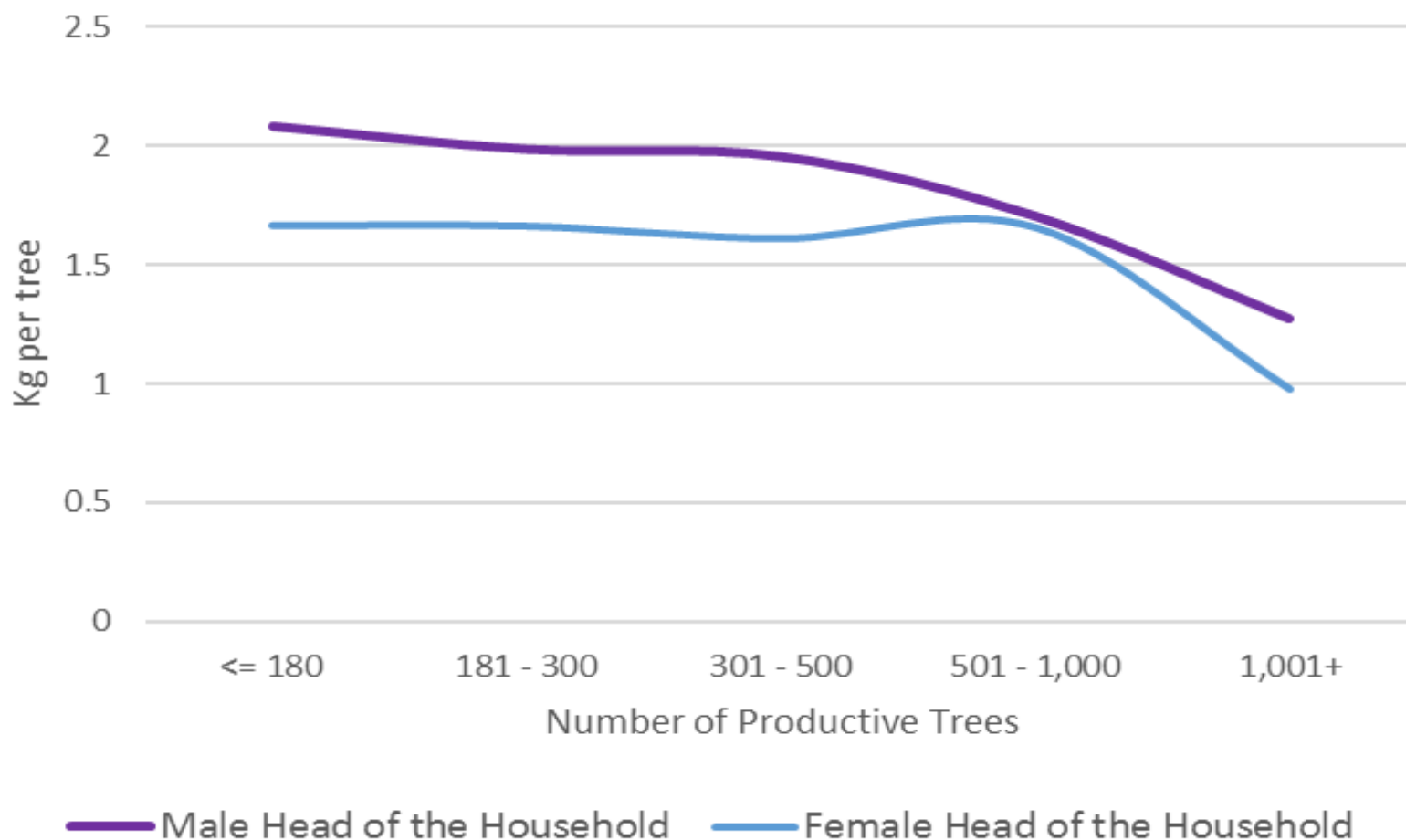


## Gender and Input Application

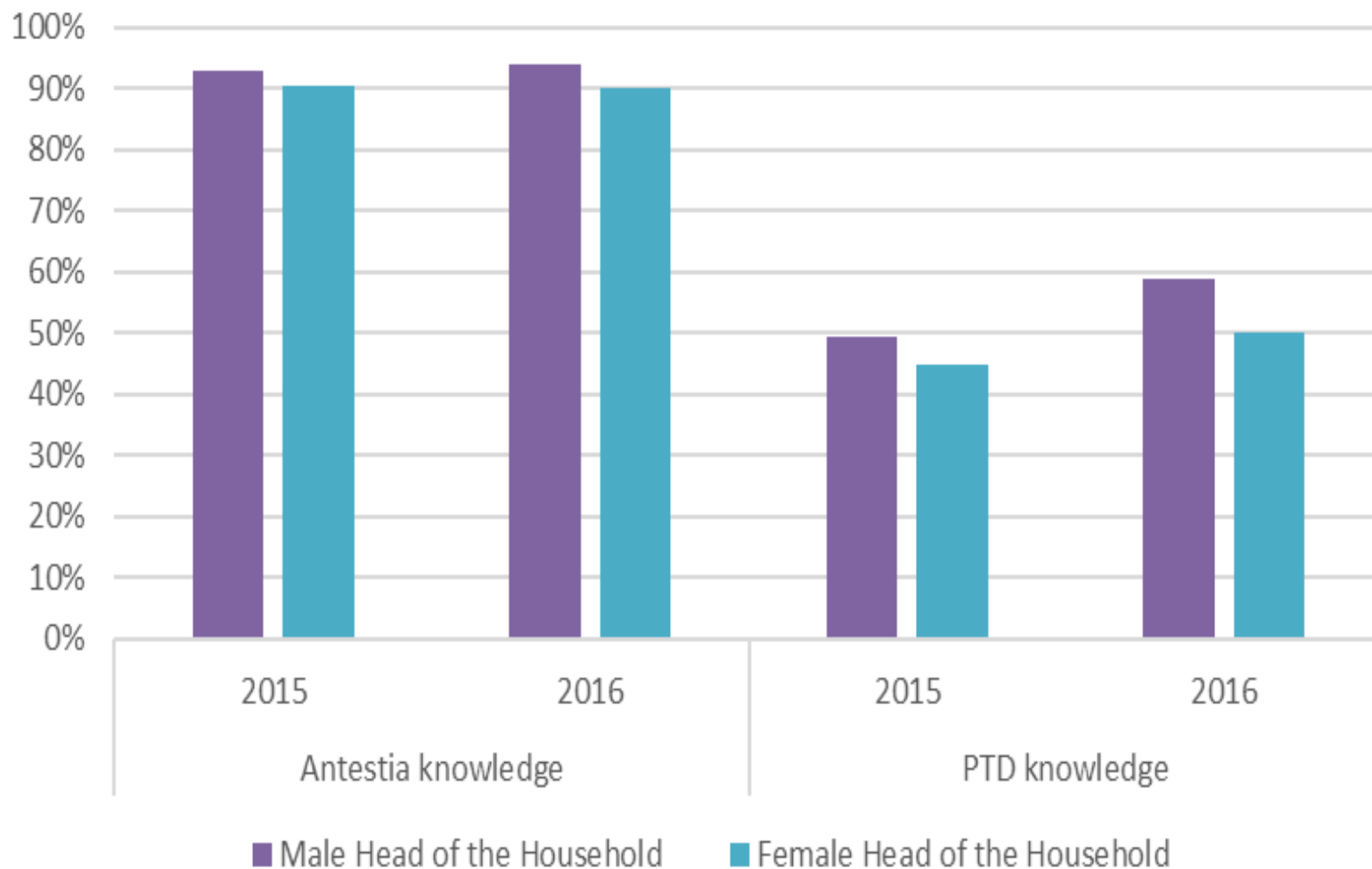




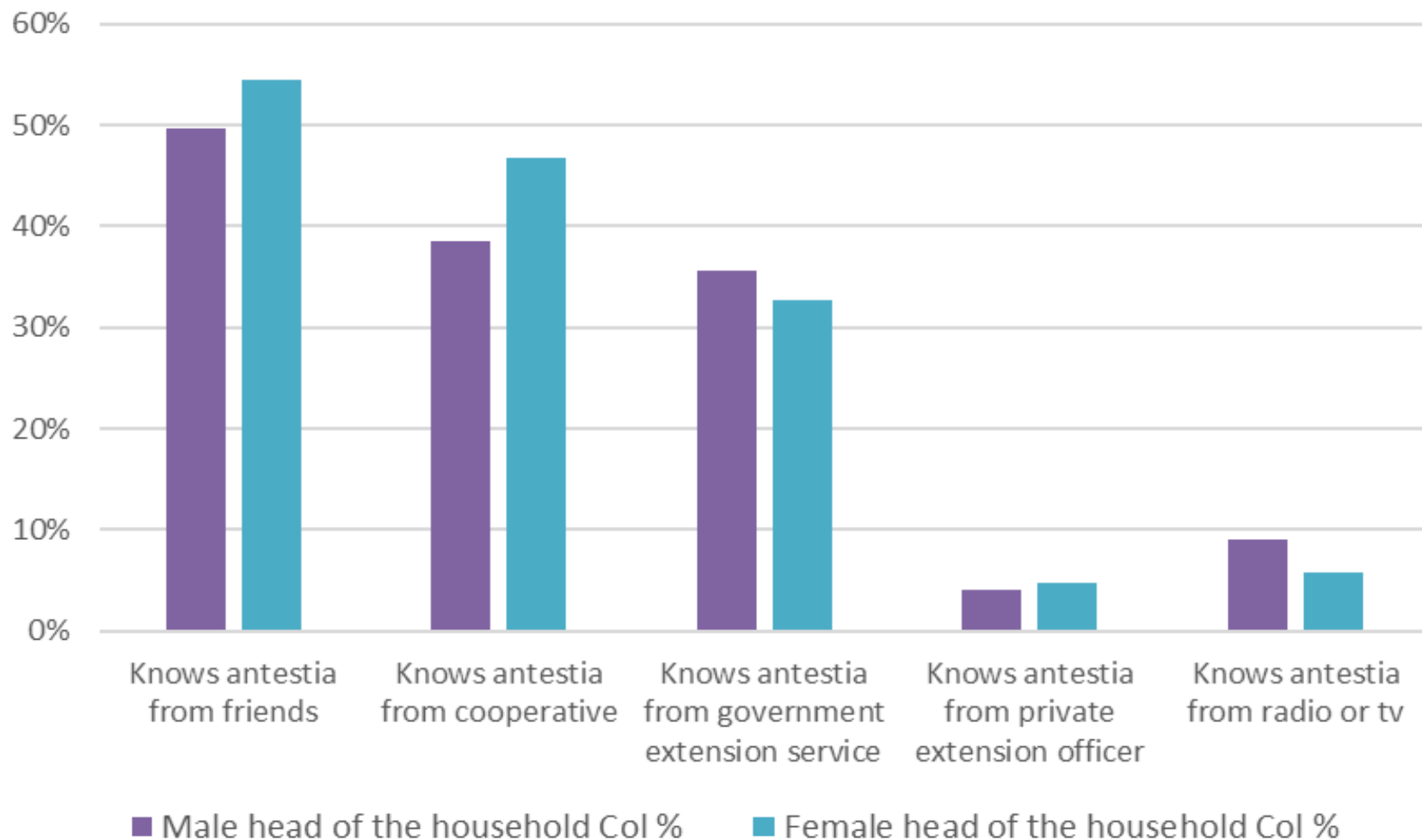
## Productivity (Kg) per Coffee Tree by Number of Productive Trees



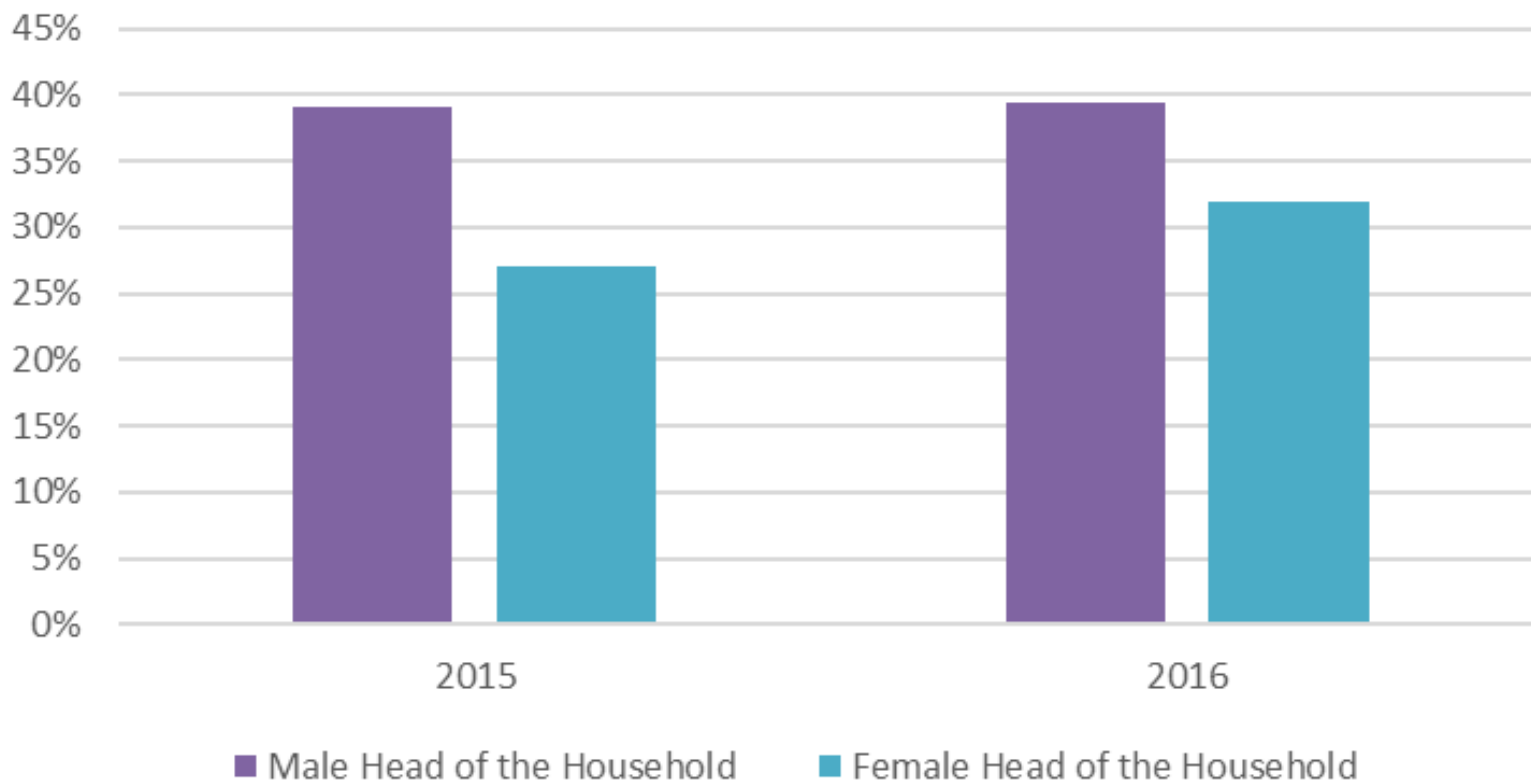
## Antestia and PTD Knowledge



## Where does knowledge about antestia come from?



## Had antesia in their coffee trees





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# Summary and Discussion Points

# Recap of challenges and findings

1. Female-headed HHs are different from the male-headed HHs (household characteristics, farms, coffee production etc.).
2. Food scarcity is higher in women headed HHs (but it is high in both groups).
3. Female-headed HHs join cooperatives more than male-headed HHs (safety net, increase capital, source of information).
4. Female-headed HHs are hiring labor to do pruning, stumping and fertilizer application.
5. Female-headed HHs apply less manure than male-headed HHs.
6. Productivity is lower in female-headed HHs than in male-headed HHs.
7. Female-headed HHs are using fewer inputs than male-headed HHs.
8. Our data shows that female-headed HHs are reporting less antestia incidence in their fields.

# Questions

- What can be done to help women manage their coffee production given their other household responsibilities?
  - What services or capacity building programs could help address this issue?
- How might we improve the productivity of women in coffee?
- What has been done/can be done to help women farmers with food security issues?
- What can be done to help women farmers with labor needs?
- In general, what has been done/can be done to elevate the standard of living for female-headed households in coffee?





# Thank You!

Cost of Production (RWF) per Kg of Cherry by Number of Coffee Trees on Farm

